**EDC 502 Foundations of Curriculum Instructor: Dr. David Byrd**

09

**Ensuring a Curriculum that Meets the Standard**

**Mt Pleasant High School**

**Melissa Lipa**

**Individual Professional Development Plan**

*Overall Smart Goal*: To improve performance on the state NECAP Science Exam from 1% proficient to 50% proficient by 2010, 70% proficient by 2011, and 85% proficient by 2012.

*Method*: As a building administrator, I will create a professional learning community in the science department by forming an instructional leadership team with representatives from each discipline to go through an item analysis of the last two years of released science NECAP tests to look at the various percentages of correct answers and incorrect choices to find potential content or skills missing that would enable the student to answer the questions correctly. First the GSE’s for each question are identified and then located for its implementation in the curriculum as well as the depth of knowledge level. The department should be brought together to look at where and when improvements can be made in the curriculum for these weak content areas or missing skills. Team members will explore best practices of instructional activities, as well as ways of assessing these concepts or skills in the classroom. Faculty will create common formative and summative assessments that include questions in the NECAP assessment format. In the spring before the NECAP science test every science teacher will go over item analysis of the released test items as a review of the content and test taking skills.

Table 1 on the following page shows how the methods in my individual professional development plan align to the expanded version of the RI leadership standards that are list below. The Complete RI Leadership Standards with the expanded elements are listed in Attachment 3 (RIDE, RI Department of Education, 2008).

RI Standard 1: Education leaders ensure student achievement by guiding the development, articulation, implementation, and sustenance of a shared vision of learning and setting high expectations for each student.

RI Standard 2: Education leaders ensure the achievement and success of each student by monitoring and continuously improving learning and teaching.

Table 1 Alignment of Methods to RI Leadership Standards

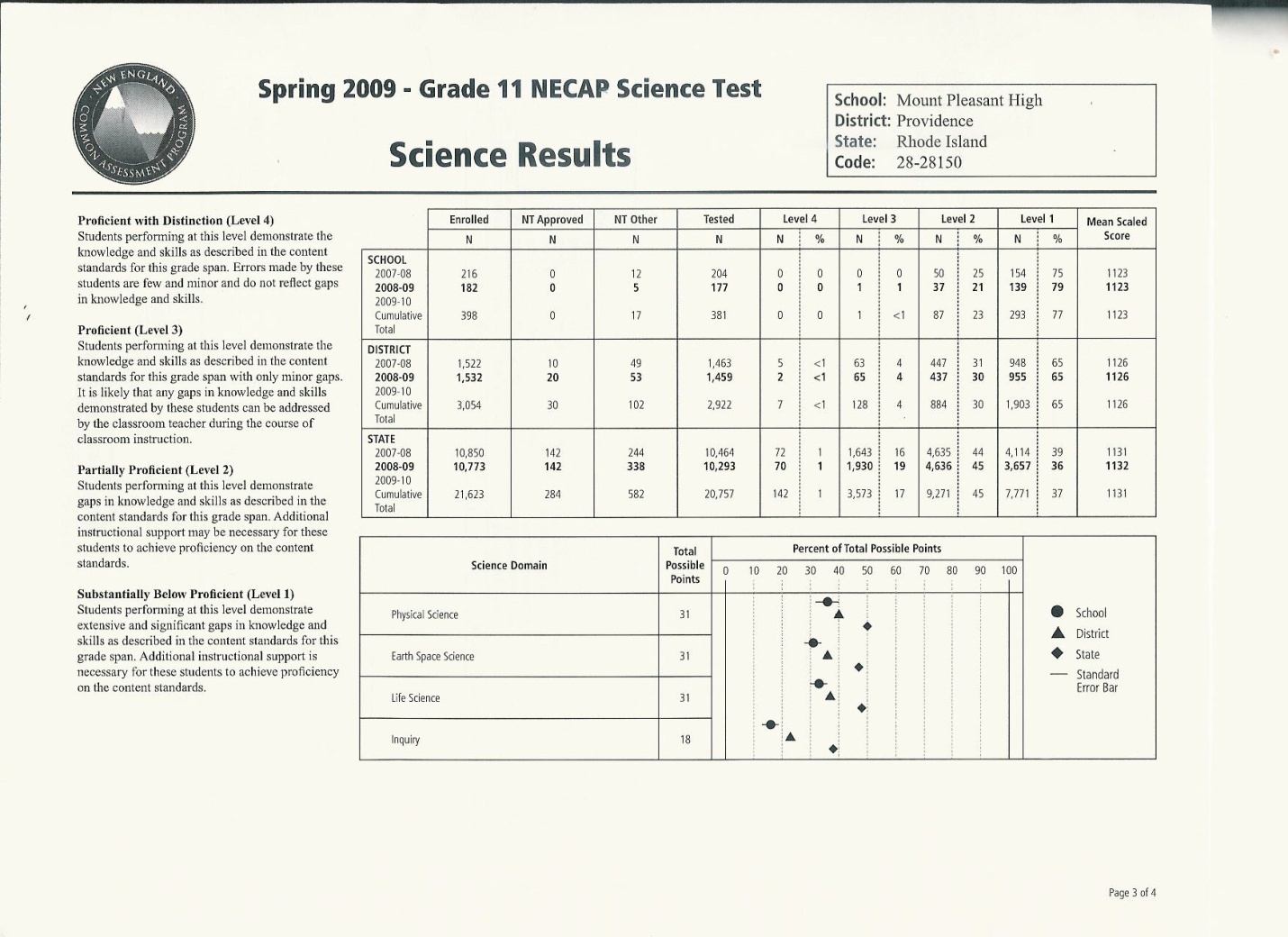
|  |  |
| --- | --- |
| Methods | RI Leadership Standard Addressed |
| Overall Smart Goal | IBiv, ICii, 2Ai, 2Ci |
| Create an instructional leadership team | IAiii, Iaiv, IBi, IBiii, 2Aii, 2Aiii |
| Exam Science NECAP Data | IAi, IAiii,Iaiv, ICi, ICii |
| Look for alignment of GSE’s with curriculum and ways to improve | IAiii, Iaiv, IBiii, ICi, ICii, ICiii, ICvii, 2Aiv, 2Av, 2Bi, 2Bii, 2Biv |
| Share best practices of instructional activities | IAiii, Iaiv, IBiii, ICi, ICii, ICiii, ICvii, 2Aiii, 2Aiv, 2Av, 2Biii, 2Biv |
| Produce faculty generated common assessments that are aligned to the curriculum, the standard, and use the NECAP format of delivery | IAiii, Iaiv, IBiii, ICi, ICii, ICiii, ICvii, 2Ai, 2Aiv, 2Av, 2Biv, 2Ci, 2Cii, 2Ciii |
| Emphasize importance to the students by item analysis activity done before the test | IAiii, IAiv,IBii,IBiv, 2Ai, 2Aiii, 2Ciii |
| Provide research based strategies and practices for those struggling students to teacher through professional development | 2Ai, 2Bv, 2Bvi, 2Bvii, 2Cii, 2Ciii |

Most of the elements of the RI leadership standards are addressed by incorporating an instructional leadership team that is based on examining student test data to evaluate, establish, implement, and revise instructional strategies that align with the curriculum. Improvements can be measured by increased student performance on NECAP science test scores.

**II. Curriculum Alignment**

Upon studying NECAP data for science which has only been around for the past two years we were able see a tremendous need for improvement. The NECAP data indicates that in all strands of science: physical science, earth space science, life science and inquiry were remarkable low across the state, district, and in my school. Looking at the spring 2009 grade 11 NECAP science test school results for Mt Pleasant High School in Data table 1 below you can see less than one percent achieved proficient with distinction, level 4, everywhere in the state. In my school and in my district the less than 4 % met proficiency. This means everyone else is below standard. There was very little improvement from the 2008 to 2009 test results in the state and the percent proficient or partially proficient decrease in the district and in my school (New England Common Assessment Program, 2009) .

Data Table 1



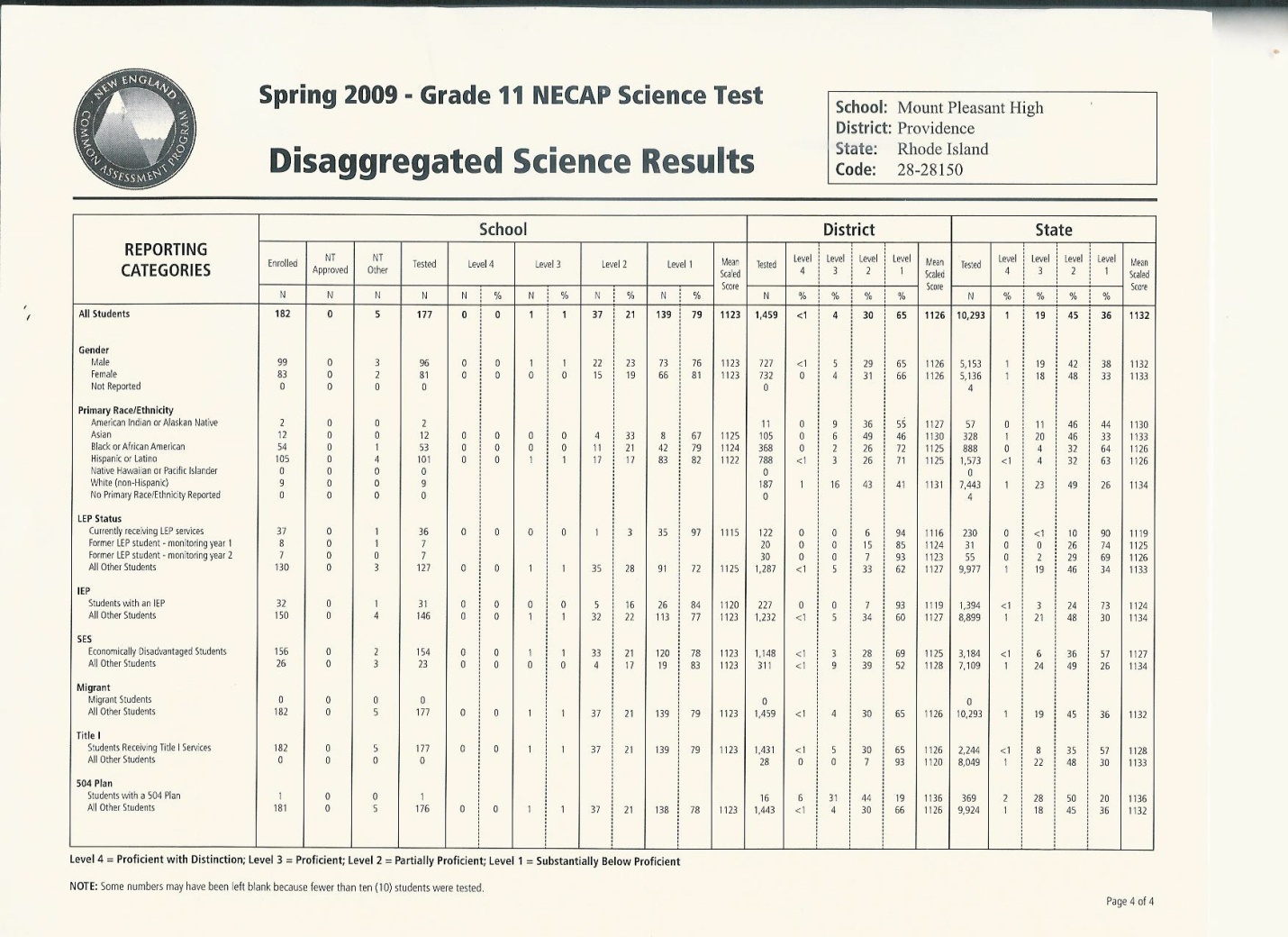
More specifically looking at the percentage of points in each strand, students earned less than half of the possible points across the state in all areas of science with the lowest by far being inquiry. My school along with the district scores have been roughly less than ten to fifteen percent lower than the state in physical science, earth space science, and life science. Science questions on the NECAP are based on the science standards. State -wide the majority of students are not meeting proficiency. All subject areas in science are not requiring the students to master the depth of knowledge needed to meet proficiency across the state.

Graphs 1 & 2

Upon comparing the 2008 to 2009 NECAP % correct in each strand, it is easy to see that the results are almost identical with the exception that students scoring points on inquiry have gone down even more. Although my school is scoring poorly as compared to the district and the state, it is important to realize that the whole state is only scoring less than 10 percent correct in any single strand in the item analysis. That is more than 90 % of students are answering questions wrong in each strand of science .

The disaggregated science results in data table 2, below, shows that all student did poorly regardless of their gender, race/ethnicity, socially economic status, or education type. These results scream that the current curriculum is not teaching was is being tested. Since the

Data Table 2 Disaggregated Science Results



NECAP test questions are aligned with the Science Assessment Targets, schools should be aligning their curriculums and instructional programs with these standards. As a result Providence has created with the help of the Dana Center and Providence’s own science teachers a new guaranteed and viable science curriculum for grades k-12.

2009 Science NECAP Question 1,

*Please use the periodic table on the reference sheet to*

*answer the question.*

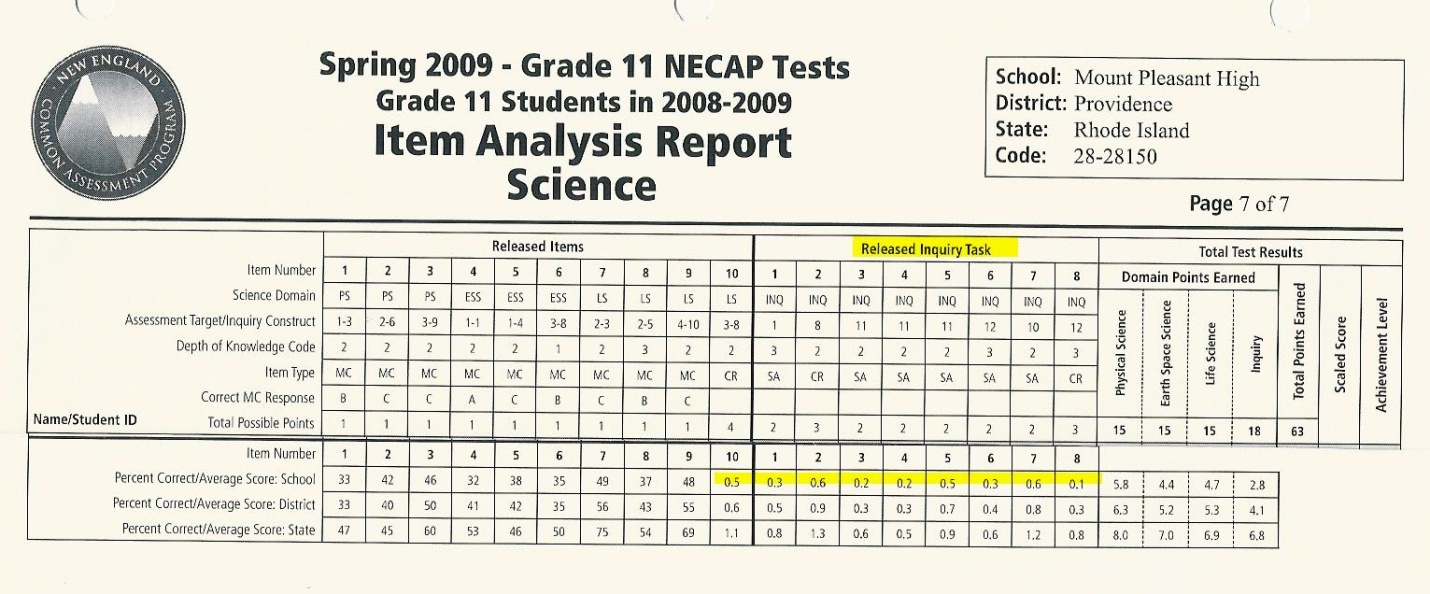
1. Which chemical property places neon (Ne) and

argon (Ar) I the same group?

1. Both elements form ionic compounds.
2. Both elements have a full outer energy level.
3. C. Both elements have low ionization energy.
4. Both elements are liquids at 38 degrees C.

Using pivot tables in excel, I was able to graph the number of students choosing each individual answer for each multiply choice question. For example, 47 students choose the correct answer B for question number one in the 2009 NECAP test; however, 63 out of 166 choose the answer A. Upon looking at question 1 and the answer choices, it is apparent that many of the students are not familiar with the relationship of elements on the periodic table. This type of analysis is especially useful for the teacher to look for areas of content weakness and for the student to review science strands that they may not have had for a few years. In addition, this practice will increase their comfort and awareness on test taking skills; such as how to read a question and how to eliminate some of the choices. See attachment 11 for the complete item analysis data for all the multiple choice questions (New England Common Assessment Program, 2009).

When looking at the item analysis science report in data table 3 on the next page the percent correct are lowest for inquiry task. All % correct are less than 1 % for the school, district and the state. Since the area of inquiry can be addressed in all strands of science and the test results are so dismal everywhere in the state, my focus in this paper will be in the area of improving inquiry. More specifically, I will be using a unit in Biology for examples to check for alignment of the new Providence science curriculum with the standards as well as more depth of knowledge in instructional strategies and assessments. As an administrator at Mt Pleasant High School, I will institute this method of change in all sciences in my school.

Table 3 Item Analysis Report Science 2009

Below is the Providence’s unit plan overview for Biology’s quarter 1, unit 3 of 4, Collecting Data from Ecosystems (2009).

**Quarter 1 Biology Unit Plan Overview**

**Unit Title:** Ecosystems **Course Name:** Biology **Grade Level(s):** 9 – 12

|  |
| --- |
| **Ecosystem Unit 3 of 4 Overview**  **Collecting Data from Ecosystems**  **Content to be learned:**  This unit is designed to engage students in exploring data collection from ecosystems to:   * understand that valid and relevant evidence is needed to identify potential biases in media sources; * understand that logical arguments about environmental issues depend n the appropriate use and interpretation of scientific data; * recognize that human events and activities can affect the flow of energy or cycling of matter in an ecosystem;   **Timeframe:** 10 days (1 day = 45 – 50 minutes)  **Prerequisite Knowledge/Skills:**  Students in grades 7 and 8 demonstrated an understanding of recycling in an ecosystem by conducting investigations. They are familiar with how matter cycles between organisms and the physical environment. They are familiar with the processes of photosynthesis and cellular respiration in relation to carbon dioxide, water and oxygen exchange.  Biology students will evaluate potential bias from a variety of media sources and discuss how information can be misinterpreted. They will analyze data and develop logical arguments in terms of how human activity affects ecosystems.    **Skills:** implement investigative procedures; apply appropriate safety measures in the class and lab rooms as well as outdoors; collect data and make measurements with precision; organize, analyze, evaluate, make inferences, and predict trends in data; communicate valid conclusions supported by data; evaluate models according to their adequacy in representing biological objects and events. |

**Essential Questions:**  Open-ended style, which promotes in-depth investigation.

* + 1. What are some human activities that impact the equilibrium of an ecosystem as it relates to soil, water, and air quality?
    2. How do human activities such as population growth, habitat disruption, agricultural practices, industrialization and energy technologies impact ecosystems?
    3. How can data be used to develop logical arguments concerning environmental issues?

**Learning Objectives:**

Students will be able to:

* Predict the effect of a development on an assigned biome. (2 day)
* Explain how local community growth might affect local ecosystems. (1 day)
* Explain how human activities affect air quality and acid rain formation. (1 day)
* Investigate ecological succession. (2 day)
* Evaluate claims and evidence to determine bias from media reports. (1 day)
* Investigate bias in interpreting the data collected in a case study. (1 day)
* Reflect on and apply knowledge learned in this unit in a new context. (1 day)
* Demonstrate understanding of concepts and skills learned in this unit. (1 day)

**Rhode Island Grade-Span Expectations:**

* **LS2** – Matter cycles and energy flows through an ecosystem
  + **LS2 (9-11)-3**

**Students demonstrate an understanding of equilibrium by…**

* + - **3b** describing ways in which humans can modify ecosystems and describe and predict the potential impact (e.g. human population growth technology; destruction of habitats; agriculture; pollution; and atmospheric changes).
  + **LS2 (9-11)-5**

**Students will evaluate potential bias from a variety of media sources in how**

**information is interpreted by…**

* + **5a** analyzing claims from evidence and sources and evaluate based upon relevance, and validity.
  + **5b** applying additional scientific data to develop logical arguments concerning environmental issues (e.g. tobacco company vs. cancer society articles on effects of smoking, government/big business vs. environmental perceptions of global climate change).

**Materials**:

* Computer with projector
* Internet access
* See materials list for *Biome Profile*
* See materials list for *Ecological Succession lab* (to be named)

**Resources:**

* *Biology,* (Miller & Levine, 2010)
* Pages *154-165*
* Analyzing Data- *American Air Pollution Trends* pages 164-165
* District-created activities:
* Biome Profile Activity
* *Ecological Succession lab*

**Assessments:**

Within each activity is the opportunity to assess student understanding of unit concepts. A single unit examination will be administered which reflects the unit objectives and will contain sample NECAP released and practice questions, in a similar NECAP structure.

Assessment Targets:

**LS2 (9-11) INQ+SAE-3 –** *Using data from a specific ecosystem, explain relationship or make predictions about how environmental disturbance (human impact or natural events) affects the flow of energy or cycling of matter in an ecosystem.*

**LS2 (9-11) NOS-5 –** *Explain or evaluate potential bias in how evidence is interpreted in reports concerning a particular environmental factor that impacts the biology of humans.*

This curriculum outline was designed to give the teacher clear guidelines of what they should be teaching, learning objectives, materials used, labs done, and assessments targets which are all aligned to the GSE’s. The data shows clearly there is a need for the guaranteed and viable curriculum. In the next section, I will show how these GSE’s are aligned with the curriculum, instructional tasks, as well as, with the formative and summative assessments that are given throughout the unit.

**III. Linkage of GSE’s to Instructional Tasks**

I chose this data collection unit because it lends itself well to inquiry activities which tend to utilize Bloom’s higher levels of knowledge such as analyze, evaluate, make inferences, and predict trends in data. Also included in the overview are the RI’s GSE addressed by this unit. Table 1 is the summary of taxonomizing each element of the unit: the standards, instructional strategies, and assessments (Anderson & Krathwohl, 2001). In Addition, I gave the level on the depth of knowledge from the chart, see attachment 4, which is the same code used for the NECAP test questions (Webb, 2005).

Table 1 Taxonomy of Collecting Data from Ecosystems

Element Column, S = standard, I = instructional activity, A = assessment

| Element | Activity | Description | Taxonomy | DOK |
| --- | --- | --- | --- | --- |
| S | Standard | **LS2 (9-11)-3** | A3, B2, C3, C4 | 2 |
| S | Standard | **LS2 (9-11)-5** | C4, C5, C6 | 2 |
| I | Class Activity & Attachment 5 | Biome Profile Activity | A1, A2, B2, C2, C5, C6 | 2 |
| I | Homework  Attachment 6 | Inquiry into Scientific Thinking | A3, B2, B4 | 2 |
| A | Homework  Formative Assessment | Read 154-157 (Miller & Levine, 2010)  6.1 Assessment Questions | A1, B2, C2 | 2 |
| I | Class Activity & Homework  Attachment 7 | Mystery – Easter Island | C1, C2, C3, C5, C6 | 2,4 |
| I | Class Activity & Homework | Inquiry into Scientific Thinking  Quick Lab Reduce, Reuse, Reycle, p.155 (Miller & Levine, 2010) | A1, B2, C2, C4 | 2 |
| A | Formative Assessment  Attachment 8 | Visual Quiz  6.4 Climate Change data | B2, C2, B3, C3 | 2 |
| I | Class Activity | Analyzing data, American air pollution trends, p 164 (Miller & Levine, 2010) | B2, C2 | 2 |
| A | Homework  Formative Assessment | Read 158-165 (Miller & Levine, 2010)  6.2 Assessment Questions | A4, B1, B2, B3 | 2 |
| I | Lab & Report  Attachment 9 | Ecological Succession Lab | B2, B3, B4  C2,C3,C4 | 4 |
| A | Formative Assessment  Attachment 10 | Visual Quiz, Succession | A1, B2 | 2 |
| A | Summative assessment  Attachment 11 | Standardized Science Department created Common Assessment | A1, B1, B2, B3, B4, C5, C6 | 1,2, 3 |

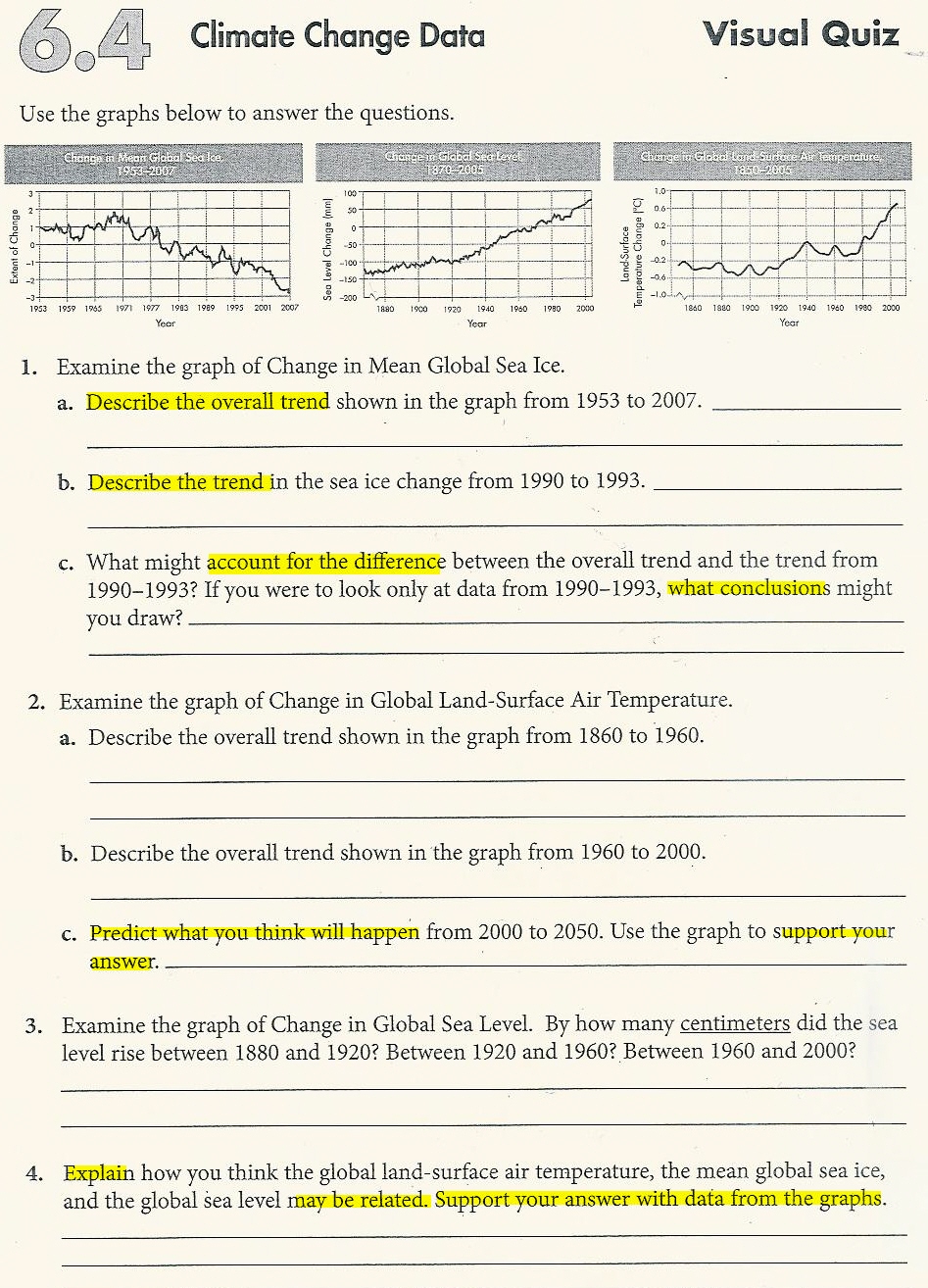
Table 2 shows where the instructional tasks, assessments, and standard fall in Bloom’s Taxonomy. This was done to show if there is alignment of standards, curriculum, instructional strategies, and assessments. To have alignment there needs to be a tendency for them to fall in the same area. The classroom assessments and the instructional tasks fall in the same areas mainly remembering, understanding, and applying factual, conceptual, and procedural knowledge. And the standards for the most part are aligned here as well. The depth of knowledge levels for all elements are mostly two’s which shows a clear alignment of the instructional task with the standards and clear alignment of the assessments with the instructional task. Overall, the instructional task, standards and assessments are all aligned (Anderson & Krathwohl, 2001).

Table 2 Unit Plan “Taxonomy of Collecting Data from Ecosystems” in Bloom’s Revised Taxonomy

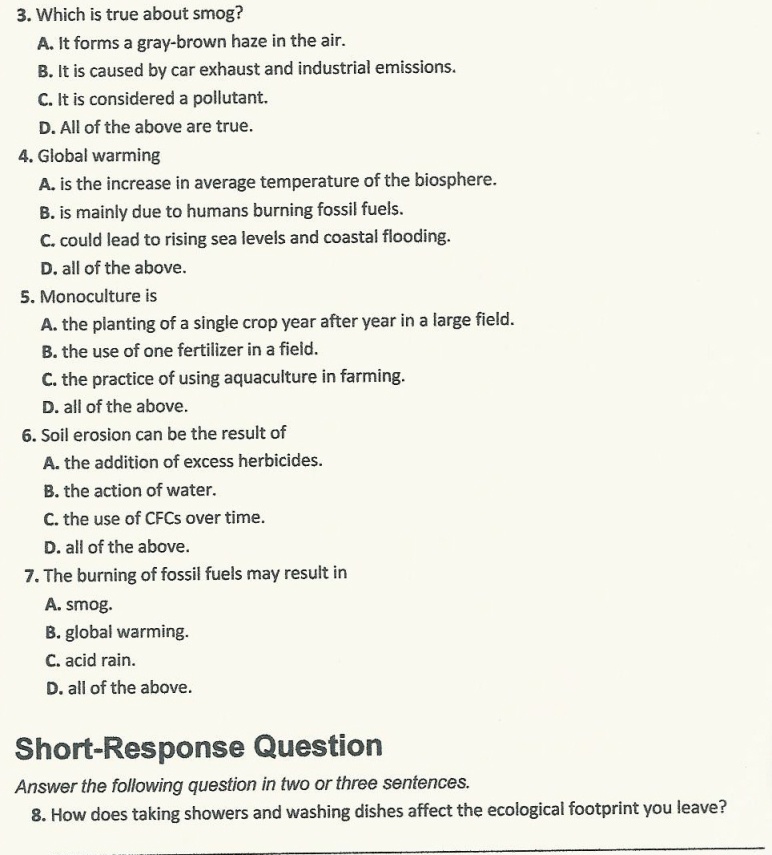
|  | 1. Remember | 2. Understand | 3.  Apply | 4.  Analyze | 5.  Evaluate | 6.  Create |
| --- | --- | --- | --- | --- | --- | --- |
| A. Factual Knowledge | I,A,I,A,A | I | S,I | A |  |  |
| 1. Conceptual Knowledge | A,A | S,I,I,A,I,A,I,A,I,A,A, | A,I,A,I,A | I, I, A |  |  |
| 1. Procedural   Knowledge | I | I,A,I,I,A,I | S, I, A, I | S,S, I, I | S, I,I, A | S, I, I, A |
| D. Meta-cognitive Knowledge |  |  |  |  |  |  |

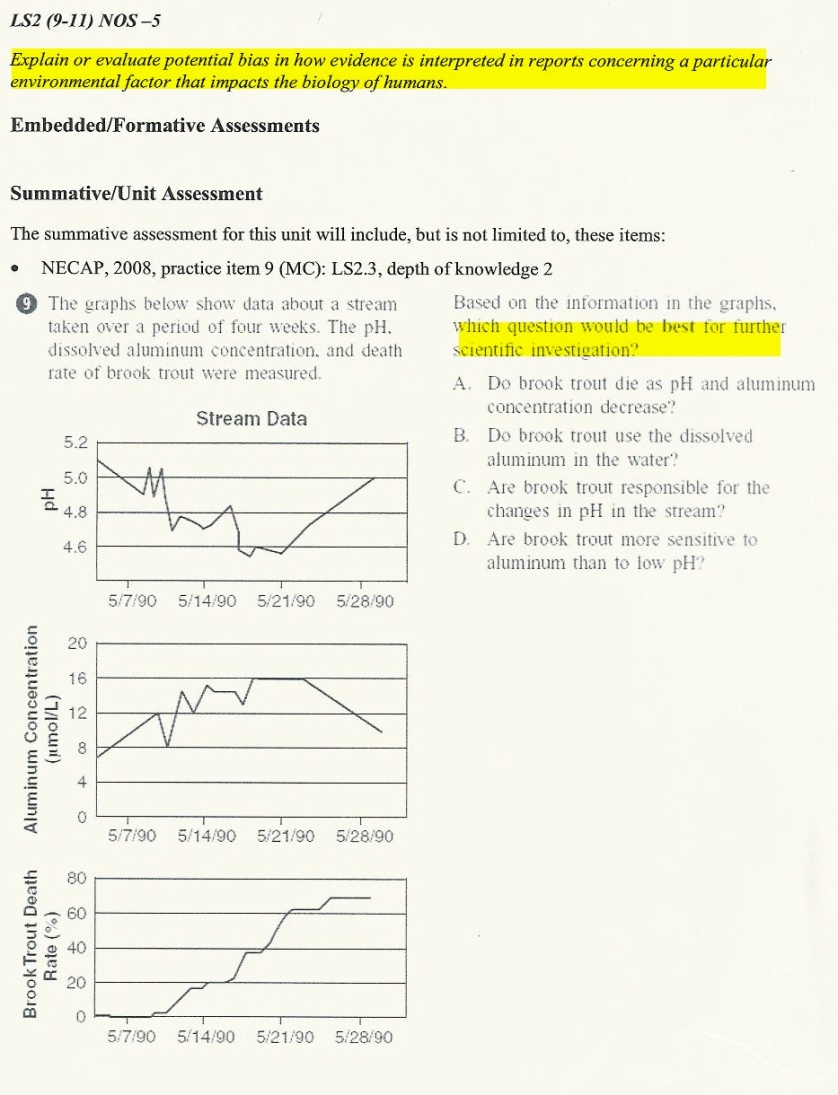
**IV. School/Classroom Assessments**

As shown above the classroom assessments are closely aligned with the instructional tasks which are aligned with the GSE’s according to Bloom’s revised taxonomy (Anderson & Krathwohl, 2001) and even more closely aligned with Webb’s depth of knowledge levels (Webb, 2005). To see this alignment more clearly I will show specific examples of the assessments being in alignment with the standards.



Like many of the questions on the NECAP science test, students need to be able to use graphs. They should be able graph data, interpret and predict cause and effect. This is a formative assessment that ask student to describe trends, account for differences, come up with conclusions, predict what will happen, and most importantly support your answer with data from the graphs. These cover DOK level 2 and 3 which is consistent with the instructional tasks as well as with the standard. However the succession quiz, see attachment 10, is lower level. It asks for the student to recall and to summarize.

 In the summative assessment, there is a mixture of DOK questions. This assessment is also clearly aligned with the instructional task. Question 3 is a recall question. Question 4 is a remembering cause and effect relationship. Question 5 is recall. Question 6 is understanding a process of procedural knowledge. Question 7 is also remembering cause and effect. All of these are level 1 and 2 DOK. However, the short answer question is ask students to apply the overall concept they learned in the unit our ecological footprint and come up with a conclusion. This is a level 4 question. It is aligned with the standard; however the butterfly lab and biome lab ask students to do similar tasks.

This last question in the summative test is an example from the Science NECAP released items. Again this is asking students to explain and evaluate which is high on Bloom’s Taxonomy and level 4 on the DOK. Again, the students experience this on the Biome lab and the butterfly activity.

V**. Group Professional Development Plan**

My overall smart goal is to improve performance on the state NECAP Science Exam from 1% proficient to 50% proficient by 2010, 70% proficient by 2011, and 85% proficient by 2012. My method of achieving this is to create a professional learning team and a school culture that believes learning is sacred. I have demonstrated in part II and III that the new Providence guaranteed and viable curriculum is aligned with the standards and assessments. In addition, this new curriculum provides clear guidelines on how to delivery this curriculum. In this section, I will outline my specific action plan on how to implement this plan in my school.

Action Plan

| Action | Who | When | How | Result/Output |
| --- | --- | --- | --- | --- |
| Teach Bloom’s revised taxonomy the depth of knowledge levels used on the NECAP test, and the definition of rigor to have teachers unpack the standards and evaluate whether their current lessons address the cognitive complexity of the standards. | Teachers by subject | During professional development during the summer for each department that will be implementing the new curriculum. | Each teacher will be required to bring a lesson to the professional development that addresses one of the state standards. The teachers in groups will break down the meaning of the state standard then review and taxonimize the standard and the assignment to determine if they are aligned. | The teacher will understand the layout of the state standards and have a better understanding of the state standards for their subject matter. They will have been refreshed on Bloom’s taxonomy, they will become aware of the need to increase alignment of lessons with the state standards.  There will be 100 % participation by teachers. |
| Presenting the new curriculum and pacing charts. | Teachers by subject  Central Administra-tion | During professional development during the summer for each department that will be implementing the new curriculum.  Daily Objectives will be listed on the board | The new teacher generated curriculum will be presented with the pacing charts. Teachers will be grouped by specific subject for which they teach, example 10th grade English, Biology, Geometry, US History. They will go through the curriculum step by step and share best practices for implementing that part of the curriculum. A group secretary will be recording these practices. The group will then decide which practices will be submitted as best practices to be compiled and posted by the central administrative team on a common site that all teachers in the district will have access to.  Daily objectives will be listed on the board | Teachers will review and become familiar with the terminology of the new curriculum, become aware of how to use the pacing charts, be provided an opportunity to share best practices as well as hear other methods to teach the new curriculum, have peer review of best practices.  The compilation of best practices for all curriculum will available to teachers on a common drive on any computer.  Daily objectives will be listed on the board in 100% of the classrooms.  There will be 100 % participation by teachers of math and science. |
| Teachers will work on common assessments that will be given to the students for the new curriculum. Once given these common assessments will be evaluated for measuring student mastery. | Teachers by subject | During professional development during the year for 30 minutes during the early release day every other week by each department that will be implementing the new curriculum. | Teachers by department will break down into smaller groups by subject taught and generate common assessments and rubrics as they go through the new curriculum throughout the first year of implementation. Teachers will review and make changes to make sure the assessments and rubrics are aligned with the standards and ensure that there is a high level of cognitive complexity addressed in these common assessments. After an assessment is given these same teachers will evaluate from specific student outcomes to determine whether there is fidelity of implementation and if not what improvements could be made to the assessments and instructional activities. | Teacher will be actively sharing best practices, providing input, creating and evaluating rubrics, and assessments on a regular basis. Therefore, teachers will be consistently working towards improvement of the quality of instruction while pressing students towards higher levels of bloom’s revised taxonomy. Peer review by teachers encourages improvement and ideas on a team working on how to solve educational problems in the classroom. |
| Create a system of interventions | Teachers, students, administration, & parents | Within the classroom, after and before school, and at home. | Students that do not exhibit mastery in a formative assessment will have the following set of interventions applied:   1. An opportunity to go to tutoring before or after school then given the opportunity to redo the formative assessment, 2. if still not showing mastery, contact parent, student required to stay after school with teacher for one-on-one extra help and allowed to redo formative assessment, 3. Parents, administration, and guidance will be contacted for students that refuse to do work. 4. Student will be evaluated to determine if there is a need to be placed in a reading or math intervention class. | Student mastery on state test will go up, number of students with grades “C” or better will increase, number of students in extra help will increase, number of parent-teacher contacts will increase. |
| Communication of student expectations | Teachers  School Improve-ment Team  School Web master | During 20 minutes of the early release teacher professional develop-ment time throughout the year.  During school improve-ment meetings | Teachers 20 minutes meet by common subject taught creating and updating a common course syllabi for each subject that contains common high expectations and grading policies.  A monthly newsletter put together by the SIT team regarding the curriculum goals and current instructional units will be sent home.  The school website and school calendar will be maintained by the school webmaster and teachers will each have a web page available to them and be provided the professional development to learn how to post assignments. | Improvement on state test scores, number of students receiving a “C” or better will increase, number of students with discipline problems will decrease, increased parent involvement in the school  Parents will be more informed on what is going on in the school.  Parents and students will have more access to what is going on in the classroom measured by number of hits to that website. |
| As an administrator evaluate, analyze data, and perform learning walks to increase situational awareness in the school and make informed implementation of schoolwide practices | Administra-tion and teacher leaders | State testing data will be analyzed yearly, student grading data will be analyzed quarterly, a minimum of 10 walk-throughs per week will be done. | The administrative team and teacher leaders will evaluate data to become well informed on changes and implementation that needs to be made. A data wall will be created in each department office as well as in the main office to keep students, parents, and teachers informed.  The summary sheets from the walkthroughs will be posted on the data wall in each department. | The data wall will be created and maintained in all areas noted.  Improvements to policy, instruction, and assessments will be made. |
| Communication of student expectations, progress, and evaluations | Teachers, parents, students | Quarterly  Daily | Progress reports and report cards will be sent out quarterly.  Students that are falling below a “C” in any course will be on a daily report that includes class room participation, behavior, homework, formative and summative assessment data to be signed by the parent nightly. | Improvement on state test scores, number of students receiving a “C” or better will increase, number of students with discipline problems will decrease, increased parent involvement in the school. |
| Multiple opportunities for Parent Involvement | Parents, teachers, adminis-trators, and students | Coffee Hour: every Friday at  9 am  Yearly: Back-to-school night,  Open House,  Quarterly:  Honor breakfast and luncheons | The principal will have a weekly coffee hour in which parents are invited to meet with the principal over coffee on Friday mornings.  Back-to-school night,  Open House  Honors breakfast and luncheons quarterly to award those receiving high honor roll and honor roll.  Parents will be invited to these parent involvement events through letters home, connect ed messages, and school calendars. | A sign in sheet will record parents attending and the number of parents attending will increase throughout the year. |
| Parent Involvement on the SIT Team | Teachers, parents, and administration | Meeting twice a month | Faculty will actively seek out parents to become part of the school improvement team | More parents will regularly attend and participate SIT meetings as noted on the sign in sheets. |
| Incentives for student achievement | Teachers, adminis-tration | Yearly for State Testing results, quarterly for honor roll | Students meeting proficiency on NECAP test scores in all subject areas will attend a school field trip to Lake Compounds at the end of the year. Students that have Perfect Attendance will receive certificates as well as a coupon for the school store. Honor roll students will be invited along with their parents to a breakfast or a luncheon to receive their certificates. | Increase in the number of students scoring proficiency on the state NECAP test. Increase in the number of perfect attendance and honor roll students. |
| Item Analysis of NECAP release science items | Teachers & students | 3 weeks, everyday, for 10 minutes, prior to the NECAP science test | All Science teachers will working on an item analysis on NECAP released items with their students for 10 minutes each day for the three weeks preceding the test to increase student awareness on test taking skills, to review all science strands, and to familiarize the student with the material so they will be motivated and mentally feel prepared to take the test. | Increase in science test state NECAP Science Exam from 1% proficient to 50% proficient by 2010, 70% proficient by 2011, and 85% proficient by 2012. |

Conclusion

My focus on this action plan is to provide professional development and interaction time for teachers. This creation of a professional learning community will allow teachers 100% collaboration on improving the quality of instruction and pressing students toward more challenging work and higher order thinking. It will give them an opportunity to analyze data, make improvements to instructional strategies, share best practices and create common assessments. In addition, there is a focus on increasing the communication of expectations and support between parents, teachers, students, and administration therefore building positive relationships in the schools. The specific action steps will move the school toward achieving the smart goals set by establishing school-wide practices for increasing rigor and academic press throughout the school.

**Attachments in Binder given to the Dr David Byrd**

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| --- | --- |
| Attachment 1 | Spring 2008 & 2009 Grade 11 Science NECAP Results & Item Analysis |
| Attachment 2 | Item analysis of multiple choice questions and 2009 Science NECAP Multiple Choice Released items. |
| Attachment 3 | Expanded Version RI Leadership standards |
| Attachment 4 | Depth of Knowledge (DOK) Levels |
| Attachment 5 | Biome Profile Activity |
| Attachment 6 | Inquiry into Scientific Thinking: Temperatures |
| Attachment 7 | Chapter Mystery Easter Island |
| Attachment 8 | Inquiry into Scientific Thinking  Quick Lab Reduce, Reuse, Recycle |
| Attachment 9 | Ecological Succession Lab |
| Attachment 10 | Visual Quiz, Succession |
| Attachment 11 | Standardized Science Department created Common Assessment |

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